

Wieland-M30 Brass (lead-free)

Extruded/drawn products

Wieland-M30 exhibits good cold working properties due to its medium copper content.

This alloy is suitable for stamping, riveting, crimping, flanging, cold extrusion or other cold working operations.

Chemical composition*

Cu	70%
Zn	balance

Material designation

EN	CuZn30, CW505L
UNS	C26000
DIN*	CuZn30, 2.0265
BS*	CZ106
NF*	CuZn30

* Reference values in % by weight

* Former national standards

Physical properties*

Electrical conductivity	MS/m	16.3
	% IACS	28
Thermal conductivity	W/(m*K)	126
Thermal expansion coefficient (0-300°C)	10 ⁻⁶ /K	19.7
Density	g/cm ³	8.55
Modulus of elasticity	GPa	114

* Reference values at room temperature

1 GPa = 1 kN/mm²

1 MS/m = 1 m/Ω • mm²

Fabrication properties

Forming

Machinability (CuZn39Pb3 = 100 %)	25%
Capacity for being cold worked	excellent
Capacity for being hot worked	good

Joining

Resistance welding	good
Inert gas shielded arc welding	fair
Hard soldering	excellent
Soft soldering	excellent

Corrosion resistance*

Brasses with a high copper content are generally resistant to organic substances, neutral or alkaline compounds. They are virtually unsusceptible to stress corrosion cracking.

Surface treatment

Polishing	mechanical	excellent
	electrolytic	excellent
Electroplating		excellent

Product standards

Rod	EN 12163
Wire	EN 12166
Tube	EN 12449

Heat treatment

Melting range	910 - 965 °C
Hot working	750 - 870 °C
Soft annealing	450 - 680 °C, 1-3h
Thermal stress-relieving	200 - 300 °C, 1-3h

Mechanical properties (values can be achieved and are a function of size and form)

Reference values	from (soft)	to (hard)
R _m [MPa]	320	1000
R _{p0.2} [MPa]	110	830
A ₁₀ [%]	50	3
HB	70	165

(Values achievable with wire)

Forms and sizes available

Material										
Wieland	EN designation		Outside diameter		Wall thickness		Circumscribing diameter		Diameter / width across flats	
	Brief designation	Number	from	to	from	to	from*	to	from	to
M30	CuZn30	CW505L	8	130	0.2	8				
Round tubes										
Drawn sections							2.5	100		
Extruded sections								130		
Sectional tubes								120		
Round and polygonal rods									2	100
Round wires									0.3	
Polygonal wires									2	

Wieland - M30

All values in mm

* Depending on the form, cross-sections in the lower size range are also available as wire.

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